

Lesson 2 Bacteria.notebook

<https://www.youtube.com/watch?v=pcXdfolLaj0>

Kingdom Archaeobacteria and Eubacteria (formerly known as Moneran) Read pgs. 471 - 477

Find the following

1. Explain the 1 main characteristic that separates Monerans from all other organisms.

they are prokaryotic - have DNA/RNA but not in a nucleus

2. Bacteria (previously known as Monerans) are placed in 2 separate kingdoms. Name the Kingdoms and give characteristics of those kingdoms... (table on page 459 will help).

1. Eubacteria - largest group, live almost everywhere, * have peptidoglycan in their cells (a protein/sugar mixture)

2. Archaeobacteria - very similar but lack the peptidoglycan in their cell walls

3. List and describe 3 ways prokaryotes are identified.

a. shapes: bacilli (rod shaped), cocci (spherical), spirilla (spiral)

b. cell walls - see question 2 from above

c. movement - some don't move, some have flagella, some spiral forward, some glide along a slime like substance they secrete

4. Define: Chemoheterotroph: take in carbon and nutrients for energy (like us)

Photoheterotroph: photosynthetic but still need a source of carbon (like venus flytrap)

Photoautotroph: use light to produce needed energy (photosynthesis)

Chemoautotroph: use chemicals to produce their own energy/food

Obligate Aerobe: must have O_2 to live

Obligate Anaerobe: dies in the presence of O_2

Facultative Anaerobe: can live with or without O_2

5. Explain the difference between binary fission and conjugation.

Binary fission - asexual reproduction

1 cell duplicates its genetic material

elongates itself

divides into 2 new cell exactly the same as the first cell

<http://www.youtube.com/watch?v=gEwzDydcWc>

Conjugation - not true sexual reproduction because **no new cell is created**

1 cell transfers DNA to another cell via a bridge that forms between them

does create some genetic differences.

<http://www.dnatube.com/video/12232/Bacterial-Conjugation-Animation>

6. List and describe ways bacteria are helpful to humans.

- help produce some medicines
- break down oil
- found in body \rightarrow digestion, vitamins, fight bad bacteria
- fix nitrogen into a usable form
 \nearrow convert
- clean water / breakdown wastes
- found in yogurt / cheese
- mine minerals